

What is claimed is:

1. An electronic device, comprising:

a substrate;

5 a lower conductive film formed on said substrate; and a functional film formed on said lower conductive film, wherein adhesion of said lower conductive film on a side of said substrate is greater than or equal to 0.1 N/cm.

10 2. The electronic device as claimed in claim 1, wherein said adhesion is greater than or equal to 1 N/cm.

15 3. The electronic device as claimed in claim 1, wherein said lower conductive film is a metallic film oriented in a (111) plane of a face-centered cubic structure or a (0001) plane of a hexagonal close-packed structure and said functional film is made of a piezoelectric material having a wurtzite crystal structure.

20 4. The electronic device as claimed in claim 2, wherein said lower conductive film is a metallic film oriented in a (111) plane of a face-centered cubic structure or a (0001) plane of a hexagonal close-packed structure and said functional film is made of a piezoelectric material having a wurtzite crystal structure.

25 5. The electronic device as claimed in claim 1, further comprising an adhesion orientation control film provided between said substrate and said lower conductive film.

6. The electronic device as claimed in claim 2, further comprising an adhesion orientation control film provided between said substrate and said lower conductive film.

5 7. The electronic device as claimed in claim 3, further comprising an adhesion orientation control film provided between said substrate and said lower conductive film.

10 8. The electronic device as claimed in claim 4, further comprising an adhesion orientation control film provided between said substrate and said lower conductive film.

15 9. The electronic device as claimed in claim 5, wherein said adhesion orientation control film is made of a crystal having a wurtzite structure.

10. The electronic device as claimed in claim 9, wherein said adhesion orientation control film is a (0001)-oriented film whose (0001) plane is oriented
20 parallel to a surface of said substrate.

11. The electronic device as claimed in claim 9, wherein said adhesion orientation control film is made of AlN.

25 12. The electronic device as claimed in claim 10, wherein said adhesion orientation control film is made of AlN.

30 13. The electronic device as claimed in claim 1, wherein a X-ray rocking curve FWHM of said lower conductive film and functional film are less than or equal to 5 degrees.

14. The electronic device as claimed in claim 13, wherein said X-ray rocking curve FWHM of said lower conductive film and functional film are less than or equal to 3 degrees.

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15. The electronic device as claimed in claim 1, further comprising an upper conductive film provided on said functional film, thereby configuring a film bulk acoustic wave resonator composed of said lower conductive film, functional film and upper conductive film.

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16. The electronic device as claimed in claim 15, wherein said substrate includes an acoustic multilayer at its surface.

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17. A method of fabricating an electronic device, comprising:

a step of forming a lower conductive film having adhesion of greater than or equal to 0.1 N/cm on a substrate; and

a step of forming a functional film on said lower conductive film.

18. The method of fabricating an electronic device as claimed in claim 17, further comprising a step of forming an adhesion orientation control film on said substrate before forming said lower conductive film on said substrate.

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19. The method of fabricating an electronic device as

claimed in claim 17, wherein said step of forming the lower conductive film is performed by sputtering at a temperature of 300 - 800 °C.

5 20. The method of fabricating an electronic device as claimed in claim 19, wherein said step of forming the lower conductive film is performed at a temperature of 400 - 600 °C.

10 21. The method of fabricating an electronic device as claimed in claim 18, wherein said step of forming the lower conductive film is performed by a vacuum deposition at a temperature of 200 - 800 °C.

15 22. The method of fabricating an electronic device as claimed in claim 21, wherein said step of forming the lower conductive film is performed at a temperature of 400 - 600 °C.